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AUTHOR(S):

Mori, Akihisa

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# How Can Climate Change Adaptation Funding Work Effectively under the Multilateral Access Modality? A Case Study of a UNEP-implemented Adaptation Fund Project in Cambodia

Akihisa MORI

*Graduate School of Global Environmental Studies, Kyoto University  
Yoshida-honmachi, Sakyo-ku, Kyoto 606-8501, Japan  
[mori.akihisa.2a@kyoto-u.ac.jp](mailto:mori.akihisa.2a@kyoto-u.ac.jp)*

## Abstract

This paper aims to identify the differences between an Adaptation Fund (AF) project and past follow-up projects of United Nations Development Programme (UNDP)-implemented National Adaptation Programmes of Action (NAPA), and then explore the impacts of these projects on vulnerability reduction. Our conclusions are twofold. First, the AF project differs in terms of its approach and management arrangements. The UNDP-implemented NAPA follow-up projects took a multi-sector, comprehensive, donor-driven approach, while the AF project implemented by the United Nations Environment Programme has taken a single-sector approach that emphasizes ecosystem-based adaptation, allowing for wider responsibility and discretion by the Cambodian Ministry of Environment and creating a space in which the project can align with its sectoral strategy and take a bottom-up approach. Second, impact drivers such as the financial sustainability of communities located near community protected areas (CPA) and the ability of local officers to understand the protocol have been insufficiently realized in the AF project. Communities tend toward maladaptation unless the project can show them visible signs of financially sustainable ecosystem-based adaptation. More fundamentally, the Royal Government of Cambodia (RGC) must create an institutional environment that enables an integrative adaptive approach to work effectively.

**Key words:** Adaptation Fund, Cambodia, theory of change, UNEP

## 1. Introduction

Mobilizing additional financial resources for international development and in response to climate change has been a challenge. Accordingly, it is described as an important means of implementing the 2030 Agenda for Sustainable Development for developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to commit a target of 0.7 per cent of their gross national income to official development assistance (ODA/GNI) for developing countries and 0.15 to 0.20 per cent of ODA/GNI for least developed countries under Goal 17.2. Mobilization of additional financial resources for developing countries from multiple sources is likewise targeted under Goal 17.3 (United Nations General Assembly, 2015).

In addition, the UN Agenda for Sustainable Development lists urgent action to combat climate change and its impacts in Goal 13. This includes strengthening resilience and adaptive capacity to climate-related hazards, and integrating climate change measures into national policies, strategies and planning.

The initial global financial mechanisms for combating climate change aimed to accelerate mitigation efforts, as climate governance architecture was developed to negotiate and manage reductions in global emissions of greenhouse gases (Ayers *et al.*, 2010). Little attention was given to adaptation until the IPCC's Third Assessment report of 2001 recognized climate change as a development problem (Huq & Toulmin, 2006). The Marrakech Accord included a resolution calling for the financing of adaptation under the Global Environmental Facility (GEF) Trust Fund, resulting in the development of a Strategic Priority on Adaptation under the GEF. It also set up three new funds: the Least Developed Countries Fund (LDCF), which was initially used to support the design of National Adaptation Programmes of Action (NAPAs); the Special Climate Change Fund (SCCF), which was intended to support climate-change-related activities, including mitigation and technology transfer, while prioritizing adaptation; and the Kyoto Protocol Adaptation Fund (AF), which supports specific adaptation projects in developing countries that are party to the protocol.

It was not until the IPCC's Fourth Assessment report

of 2007 showed that the impacts of climate change had already begun that these new global climate funds began operation. As the LDCF and SCCF are administered in the same manner as the GEF Trust Fund, they have been criticized for governance structures dominated by developing countries and for their reliance on multilateral institutions for implementation. These criticisms centered on their reliance on multilateral institutions as barriers to addressing the specific needs and social vulnerabilities of developing countries, as well as to ensuring deeper commitments to adequate and predictable funding from developed countries (Grasso, 2010). While these funds strongly value participation, most of them are oriented toward institutions and community representatives (Biagini *et al.*, 2012).

The AF has been organized to minimize these problems. The Adaptation Fund Board (AFB) consists of an equal number of representatives from developed and developing countries. It is financed through a levy on the Clean Development Mechanism. Besides its multilateral access modality under which multilateral institutions implement projects, the AF has adopted a direct access modality in which national implementing entities (NIEs) in recipient countries implement projects. The NIEs are responsible for identifying, designing, developing and submitting proposals, followed by supervising, evaluating and reporting on the financed projects. Recipient countries thus have higher ownership and commitment to the funded projects and manage global financial resources in line with national concerns, both of which lead to greater effectiveness (Bird *et al.*, 2011).

It is not easy, however, for national entities to be accredited as NIEs and for NIE-initiated project proposals to be approved by the AFB. As of November 2015, only 20 national entities had been accredited as NIEs and only 17 projects proposed by these NIEs had been approved (AF, 2015). Many developing countries continue to rely on multilateral implementing entities (MIEs).

Cambodia is one of the least developed countries and is identified as among the most vulnerable to climate change. It relies heavily on a single rice cropping cycle, and a large proportion of the population resides in low-lying areas. Moreover, the country has little capacity or funding for dealing with unpredictable or extreme weather events. At the outset, the Royal Government of Cambodia (RGC) focused only on post-disaster relief operations in response to extreme weather events. International donors have focused on the rehabilitation of reservoirs and irrigation channels, with little consideration given to information provided by climate change models and scenarios (ALM, 2010).

While the RGC relies heavily on such external financing, it has recently attempted to reduce this reliance and enhance government capacity in order to be accredited as an NIE. Although net official development assistance constituted 49% of central government spending in 2013, this was much lower than the figure

of 112% in 2005 (World Bank, 2015). The government followed the UNDP's National Implementation Guidelines and Procedures (UNDP, 2011a) in order to assume full ownership and responsibility for the formulation, effective management and execution of all aspects of MIE-supported projects. Nevertheless, a lack of administrative capacity forced the RGC to rely on multilateral institutions in implementing the projects.

The RGC has implemented several GEF- and LDCF-funded projects related to climate change. These include preparations for the NAPA and its follow-up projects as well as the sustainable forest management and protected areas projects (Table 1). In addition, the RGC obtained funding from the AF to implement a climate resilience enhancement project in community protected areas (CPAs). Its main strategy has relied on a set of concrete eco-agriculture interventions that are tailored to the local biophysical and socioeconomic conditions in the relevant CPA. These interventions consist of the following: (1) development of protocols for forest restoration and conservation agriculture; (2) concrete eco-agriculture adaptation interventions; (3) institutional capacity building, awareness raising and upscaling of eco-agriculture interventions.

In contrast with GEF projects that are mandated to show global environmental benefits, LDCF and AF projects can be more development-focused and bottom-up, investing in agriculture, food security and water resources. In addition, the AF allows implementing entities wider discretion in designing project proposals and arranging management. This can generate differences in projects' focus, design and approach, leading to different impacts despite their shared goals of vulnerability reduction and/or resilience enhancement.

Against this background, this paper aims to identify differences between the AF project and past UNDP-implemented NAPA follow-up projects, and then to explore the extent to which the key factors with bigger impacts on vulnerability reduction are realized.

Toward this end, this paper employs the "theory of change," which is a logical sequence of conditions and factors that are necessary to deliver an ultimate goal. This theory was developed for the sake of assessing the critical steps toward a specific impact (Todd & Craig, 2014). A project document usually describes an ultimate goal that is beyond its scope. This makes it difficult to assess whether the ultimate goal will be attained through the generated outcomes. The theory of change makes this possible by identifying and assessing key elements in the outcome-impacts pathways.

This paper is organized as follows: Section 2 surveys literature related to the NAPAs and UNDP-implemented NAPA follow-up projects to explore the underlying reasons for their low effectiveness. Section 3 identifies the differences between the AF project and UNEP-implemented LDCF follow-up projects. Section 4 employs the theory of change to evaluate how the conditions for greater impact have been met so far.

**Table 1** GEF Approved Climate Change Adaptation Related Projects, as of May 31, 2015.

MIE	Approved date	Project Name	Focal Area	Funding Source	Status
UNDP	3/24/1997	Enabling Cambodia to Prepare its First National Communication in Response to its Commitments to UNFCCC	Climate Change	GEF Trust Fund	Under Implementation
	2/22/2002	Climate Change Enabling Activity (Additional Financing for Capacity Building in Priority Areas)	Climate Change	GEF Trust Fund	CEO Approved
	12/17/2002	Programme of Action for Adaptation to Climate Change	Climate Change	LDCF	Under Implementation
	4/2/2009	Promoting Climate-Resilient Water Management and Agricultural Practices (PCRWM)	Climate Change	LDCF	Project Completion
	11/13/2008	SFM Strengthening Sustainable Forest Management and the Development of Bio-energy Markets to Promote Environmental Sustainability and to Reduce Green House Gas Emissions in Cambodia	Multi-focal Area	GEF Trust Fund	Under Implementation
	10/23/2014	Strengthening Climate Information and Early Warning Systems in Cambodia to Support Climate Resilient Development and Adaptation to Climate Change	Climate Change	LDCF	CEO Endorsed
	3/25/2015	Reducing the Vulnerability of Cambodian Rural Livelihoods through Enhanced sub-national Climate Change Planning and Execution of Priority Actions	Climate Change	LDCF	CEO Endorsed
UNEP	3/1/2011	Vulnerability Assessment and Adaptation Programme for Climate Change in the Coastal Zone of Cambodia Considering Livelihood Improvement and Ecosystems (VA)	Climate Change	LDCF	CEO Approved
	3/6/2014	Strengthening National Biodiversity and Forest Carbon Stock Conservation through Landscape-based Collaborative Management of Cambodia's Protected Area System as Demonstrated in the Monduliri Conservation Landscape (CAMPAS Project)	Multi-focal Area	GEF Trust Fund	CEO Endorsed
FAO	9/15/2011	Strengthening the Adaptive Capacity and Resilience of Rural Communities Using Micro Watershed Approaches to Climate Change and Variability to Attain Sustainable Food Security	Climate Change	LDCF	CEO Endorsed
IFAD		Building Adaptive Capacity through the Scaling-up of Renewable Energy Technologies in Rural Cambodia (S-RET)	Climate Change	Special Climate Change Fund	PPG Approved

Source: GEF, retrieved from [http://www.thegef.org/gef/country\\_profile/KH](http://www.thegef.org/gef/country_profile/KH), last accessed on May 31, 2015.

Section 5 discusses the above achievements in the context of farmers' adaptive activities at the intervention sites, and Section 6 presents our conclusions.

## 2. Past Multilateral Funding for Adaptation in Cambodia

Based upon Cambodia's NAPA, the RGC published the National Strategic Development Plan Update (2009–2020). This updated plan prioritized integration of climate change into national, sectoral and sub-national level planning; development of climate change strategies; formulation of action plans; and establishment of financing frameworks.

The Cambodian NAPA, however, has been evaluated as the weakest integration of climate change adaptation (CCA) into national development plan among those of the least developed countries in South and Southeast Asia (Saito, 2013). It emphasizes infrastructure development while giving relatively little emphasis to capacity development. Financial resources and the cooperation necessary for the development of the institutional capacity for CCA are severely lacking (Deny *et al.*,

2014). The NAPA also places an unsustainable focus on preventive adaptation measures due to competing priorities for immediate investment (D'Agostino & Sovacool, 2011).

This lack of mainstreaming and the bypassing of local development processes have been partly responsible for the ineffectiveness of multilateral funding adaptation projects. The UNDP-implemented NAPA follow-up and sustainable forest management projects have suffered from smaller-than-expected impacts despite an emphasis on capacity development at the subnational government level.

The UNDP has adopted an integrative planning approach for the three NAPA follow-up projects listed in Table 1. All three of these projects have targeted subnational planning in order to align with decentralization and deconcentration reforms, as well as to create a mechanism through which local communities can provide locally specific knowledge of climate risk and subnational governments can effectively respond to the needs of local communities. They have also facilitated the creation of small-scale water management infrastructure that has enhanced resilience in conventional agricultural

production. In the Promoting Climate-Resilient Water Management and Agricultural Practices (PCRWM) project, the UNDP included vulnerability risk assessment (VRA) as a project component to empower farmers in taking ownership and control of the project activities at the street level (MAFF *et al.*, 2010).

Nonetheless, this assessment had limited influence on project work plan activities. The VRA was made only after the completion of the project design and during the rice growing season when it was difficult to survey the most economically active people (ALM, 2010), resulting in a top-down evaluation (Sherman & Ford, 2014). While funding for community projects took place at the provincial level, the amount of funding was too small to satisfy the proposals, discouraging officials from taking steps to properly plan and budget for development and adaptation priorities (RGC & UNDP, 2015).

Lack of inter-ministerial coordination between the Ministry of Environment (MoE), Ministry of Agriculture, Forest and Fisheries (MAFF) and Ministry of Water Resource and Meteorology (MoWRAM) led to a “parallel project syndrome,” creating separate but identical farmer-based organizations (RGC & UNDP, 2015). The UNDP initially planned to appoint the MoE as the implementing entity, assuming that the MoE and the Cambodian Climate Change Alliance (CCCA) should be the apex in climate-change-related activities. In the preparatory process, however, it found that MAFF would be more suitable and appointed MAFF as the executing entity. It later learned that MoWRAM, rather than MAFF, was responsible for water management infrastructure, leading to the appointment of MoWRAM as an executing entity. MoWRAM, however, did not take specific climate resilient design standards into account in irrigation rehabilitation projects. The MoE and other government agencies did not deliver their services at the needed levels (ALM, 2010). In addition, adaptive intervention experiences were not shared across ministries (D’Agostino & Sovacool, 2011).

The parallel project syndrome turned out to be more serious in the UNDP-implemented sustainable forest management project. The UNDP took a sectoral approach to the project because authority over forests resides in the Forest Administration, not under provincial governors or the MoE, despite the project including forest /wood energy-related carbon credits as a component (UNDP, 2011b). This sectoral approach made it difficult to secure commitments from the MoE and communities near CPAs. It also made it difficult to properly address land conflicts, diverging interests of communities over the forestland, and encroachment resulting from open access to forest areas (UNDP, 2014).

These early experiences led the RGC to believe that the UNDP’s “technological view of adaptation” (Klein, 2008) that specifically reacted to the impacts of climate change using a donor-driven, top-down project management model could not sufficiently address the local needs of more vulnerable groups. The MoE sought funding that would allow a more development-oriented,

bottom-up approach. In the meantime, the RGC sought assistance for financial management systems improvement as a way of expediting the transfer of funds from international donors, (Sovacool *et al.*, 2012).

### 3. Differences in UNEP-implemented Adaptation Projects

After the insufficient outcomes from the NAPA follow-up projects, the MoE invited UNEP to be an implementing entity in applying funding from the global climate funds (Interview with an MoE officer in charge of the AF project, February 26, 2015). Unlike the UNDP, UNEP takes an ecosystem-based adaptation approach that regards the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people and communities adapt to the negative effects of climate change at the local, national, regional and global levels (UNEP, 2015). UNEP also transfers project management responsibility to recipients so that they have wider discretion in daily operation while UNEP retains oversight, project assurance and accountability functions.

In the NAPA follow-up vulnerability assessment project, the UNEP designed targeted local interventions to rehabilitate mangroves as a way of increasing the resilience of coastal buffers and as a source of alternative livelihood. It also adopted an integrative approach to integrating climate change risks into national level development policies pertaining to the coastal zone, as well as to developing a participatory local level adaptation plan (UNEP, 2011). In addition, it delegated management responsibility to the director of the Coastal Coordination Unit of the MoE, who was appointed as the national project coordinator. To facilitate the implementation of the project activities in their respective agencies, representatives from key ministries were appointed as senior beneficiaries on the board. International technical assistance will only be requested for specialized tasks where there is insufficient capacity among government staff or national consultants.

The GEF-funded Collaborative Management of Protected Area System project also uses a landscape-based protected area and forest management approach. To increase both forest resources and the livelihood of communities, the project includes boundary demarcation, clarification of land tenure and resource access rights with related community conservation agreements as components. Another aim is to enhance inter-sectoral coordination in forested protected areas that are under the jurisdiction of the MoE and threatened by encroachment in order to develop a national protected area system vision (GEF, 2012).

Learning from the experiences of these projects, the MoE took the same approach in the AF project. The AF project employs the eco-agriculture concept to advance this ecosystem approach for the CPAs. This is defined as a landscape approach to natural resources management that seeks to sustain agricultural/ food production, conserve biodiversity and ecosystems and support local



livelihoods (AF, 2012). Despite UNEP's function in oversight, project assurance and accountability for project performance to the AF, it was not an official member of the project board, giving national ministries, especially the MoE, wider discretion and opportunities to enhance project ownership and capacity.

#### 4. Impact Drivers and Assumptions for Attaining the UNEP AF Project Objective

##### 4.1 Theory of Change Overview

Key elements in the theory of change are intermediate states, impact drivers and assumptions (Todd & Craig, 2014). Intermediate states are the transitional conditions between a project's outcomes and the intended impacts. Impact drivers are the significant factors that are expected to contribute to realizing project impacts and are within the ability of the project to influence, while assumptions are those factors that are largely beyond the power of the project.

Based on a review of project documentation and consultation with MoE officers in charge, we combined the first two components, and set this as the first intermediate state, as shown in Fig. 1, while the third component served as the second intermediate state. For achieving the first intermediate state ("supply a diverse range of food and stabilize topsoil"), the review

identified four impact drivers and one external assumption. The impact drivers were (a) understanding of the protocol by local authorities; (b) availability of local technical expertise network; (c) sufficient buy-in of CPA stakeholders; and (d) financial sustainability of CPA communities. The assumption concerned the security of land tenure. For achieving the second intermediate state ("mainstream climate resilience of local communities integrated into a national adaptation framework and related sector policies"), a national eco-agriculture upscaling strategy needed to be developed as an impact driver and an assumption of political leadership and clear vision needed to be satisfied.

##### 4.2 Assessment of Progress

We make this assessment on the basis of interviews with an MoE officer in charge of the AF project and a field survey of AF project sites (Chon Tlork community, Skou Krouch community and Chon Bengper community) during September 23–26, 2015.

##### 4.2.1 Outcomes

The AF project has contributed to the development of forest restoration and conservation agriculture protocols. UNEP has twice conducted CPA community surveys to help tailor the additional adaptation activities to the specific needs of individual CPA intervention sites. This

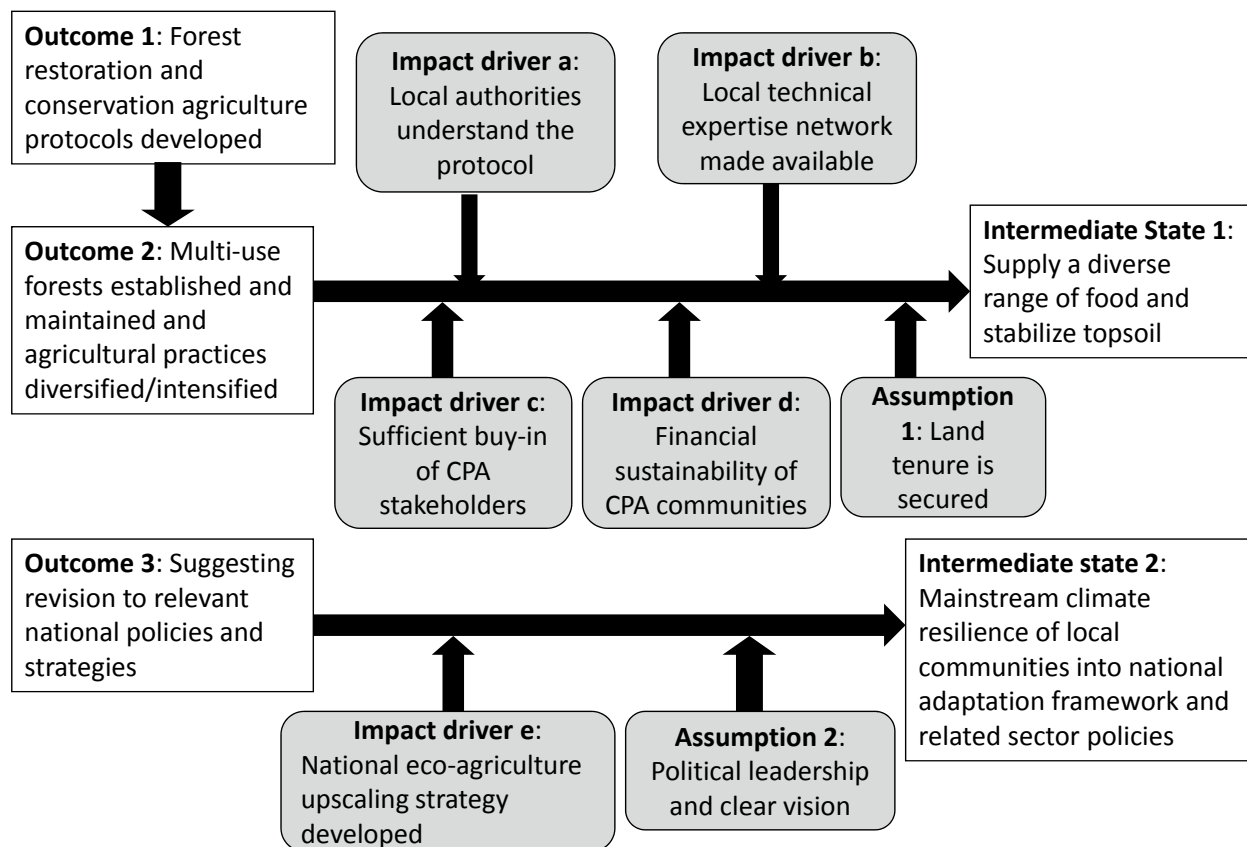


Fig. 1 Overview of the theory of change for the UNEP AF project.

stands in sharp contrast to the practices of the UNDP, which employs consultants to hold a few days of training workshops while providing little chance for participants to gain on-site expertise and experience. The AF project provided communities with training programs on the development of business plans and conducted market surveys on the most economically valuable varieties of rice. The MoE organized facilitative teams consisting of two MoE officers and one local ranger to disseminate eco-agriculture and forest conservation knowledge. As a result, an increasing number of farmers have come to recognize agricultural diversification as a way of adapting to droughts caused by climate change.

The project has also raised fruit seedlings (mango, apple, jackfruit) to provide short-term income and indigenous multi-use tree species that will have value in 20-30 years. These have been given to community farmers free of charge to plant in their home gardens and/or community forests. It has also provided expertise on home gardening that helps avoid space conflicts with chicken breeding, a traditional activity of all of the farmers. In contrast, there has been no visible progress in changing the relevant national policies and strategies.

#### 4.2.2 Impact Drivers and Assumptions

As most of the progress can be seen in the project's first two components, we focus on these two components in order to deepen our analysis.

The project has enhanced the network of local technical expertise (impact driver (b)) through the recruitment of 15 national and local consultants. Hired consultants perform facilitation and knowledge sharing with CPA communities at the intervention sites, provide tools for modeling the impacts of climate change, and transfer marketing skills for selling local non-timber forest products (NTFPs) to national and global markets. By providing seedlings and technical expertise, the project has attracted an increasing number of CPA farmers, satisfying impact factor (c). Land tenure is secured at the CPAs through 30-year agreements with the government under the protected area law. The project has assisted intervention communities in protecting designated CPA forests from encroachment through strengthened patrol systems, planting tree seedlings and harvesting NTFPs to increase cash income: CPA farmers are permitted to bring NTFPs to market once the community concludes a memorandum of understandings on protection of community forests with the MoE.

The scale of home gardening and forest restoration, however, remains too small to ensure financial sustainability for local farmers (impact driver (d)). In addition, the project has been ineffective in enhancing local government understanding of the protocol (impact driver (a)). Two out of five intervention communities have yet to designate CPAs. They continue to cut down trees to sell timber and charcoal, or to clear forestland for cassava plantation. While one community concluded an agreement on a CPA forest, it has allocated a small portion of forestland, but wants to use a large portion for

small-scale logging and cultivation. Local officers also show little interest in the protocol despite the fact that the project provides training courses for local authorities as well as local communities at each CPA intervention site. Low salaries provide little incentive for local officers to perform additional tasks such as setting local protocols or implementing local adaptation plans.

This state of affairs implies that the intervention has not yet enhanced the institutional environment enough to convince all the CPA stakeholders to take an ecosystem-based approach. It is highly likely that CPA farmers will give up on forest restoration and conservation agriculture once project completion makes these adaptive activities financially unsustainable.

## 5. Discussion

Our assessment using the theory of change shows that while the AF project has affected the outcome in terms of forest protection and restoration, it has not made a significant contribution to sustaining the adaptive activities financially or institutionally. It has provided insufficient incentives for local government officers and has not generated additional income to compensate sufficiently for the loss caused by climate change. Lack of irrigation coupled with a prolonged drought has led CPA farmers to choose cassava and nut plantations in order to adapt by themselves. One surveyed community converted a non-CPA community forest into a cassava plantation and other community farmers went to work at the plantation as laborers. This adaptive activity can help a community to diversify food and income sources, thus reducing vulnerability to climate change as these crops require less water for production than rice. However, it cannot always stop external pressure from encroachment and illegal activities, leading to deforestation. In addition, intensive cassava plantation can make the soil infertile, as experienced in Thailand.

The underlying cause resides in ministerial segregation and insufficient mainstreaming of CCA into sectoral strategies. The project was formulated through direct negotiation between UNEP and the MoE, and funding has been directly allocated to the MoE through off-budget accounts. Although concerned ministerial representatives are involved through the NCCC and CPA farmers have voiced their needs, the project does not include irrigation as a component because that is under the authority of MoWRAM. The MoE had no choice but to give up irrigation so as not to repeat the confusion and ineffectiveness experienced in the PCRWM project.

Nonetheless, the RGC will continue the single-sector approach in CCA funding as the National Strategic Development Plan 2014-2018 emphasizes the responsibility of line ministries to attain certain targets, giving an excuse for donors to negotiate and cooperate directly with the line ministries.

For the AF project to scale up nationwide, however, it will be necessary for the RGC to further mainstream CCA into sectoral strategies so that ministries can take

an integrative approach to enhance adaptive capacity at the intervention sites, reducing external as well as internal pressure from encroachment.

## 6. Conclusions

This paper has sought to identify the differences between an AF project and past UNDP-implemented NAPA follow-up projects, and then explore the extent to which the conditions for greater impacts on vulnerability reduction have been realized. Our conclusions are summarized as follows.

First, the AF project has differed in terms of its approach and management arrangements. Learning from past UNDP-implemented NAPA follow-up projects that took a multi-sectoral, comprehensive approach, the current UNEP-implemented AF project has taken a single-sector approach that emphasizes ecosystem-based adaptation. Also, while the former took a donor-driven approach, the latter has allowed the MoE greater responsibility and discretion, even under the multilateral modality, creating a space to align the project with its sectoral strategy and to take a bottom-up approach.

Second, among impact drivers and assumptions, effective consultation, economic evaluation of eco-agriculture activities and security of CPA land tenure have been satisfied, but the financial sustainability of CPA communities and local officials' understanding of the protocol have not. The communities are heading toward maladaptation unless the project provides visible signs of financial sustainability of ecosystem-based adaptation in the communities in which intervention has been implemented.

These results imply that the RGC must create an institutional environment that enables an integrative CCA approach to work effectively and to secure financial sustainability. This will enhance mobilization of additional financial resources for developing countries from multiple sources as described in Goal 17.3 of the UN 2030 Agenda for Sustainable Development.

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**Akihisa MORI**

Akihisa MORI is an associate professor of Global Environmental Economics at Kyoto University, Japan. He is also director and secretary general of the East Asian Association of Environmental and Resource Economics. He has conducted research on environmental aid and climate finance for two decades, being awarded the Promotion Award of the Society of Environmental Economics and Policy Studies in 2010 for his publication on *Environmental Aid: Logic, Strategy and Evaluation of Environmental Aid for Sustainable Development* (in Japanese). He has expanded the scope of his research to include environmental policy and governance in developing Asia, environmental fiscal reform, environmental policy integration, and energy and climate security. In this line, he has served as editor of two books entitled *Environmental Governance for Sustainable Development: East Asian Perspectives* (Tokyo: United Nations Press, 2013) and *Democratization, Decentralization and Environmental Governance in Asia* (Kyoto: Kyoto University Press, 2012). He was also co-editor of two books from Routledge, *Environmental Fiscal Mechanism and Reform: East Asia and Europe* and *Green Growth and Low Carbon Development in East Asia*.

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